

dampers ride. These areas should be free of burrs, dents and corrosion. Replace if necessary.

9. Inspect the driven sprocket (B, Figure 76). Compare to Figure 60. If it is worn or distorted, replace the sprocket.

#### *NOTE*

*If the driven sprocket is worn or damaged and must be replaced, also inspect the drive chain and drive sprocket for damage. Never replace just one of these 3 components without a thorough inspection of all the rest. If one is replaced, the other 2 should also be replaced. If not, the new component will wear out prematurely.*

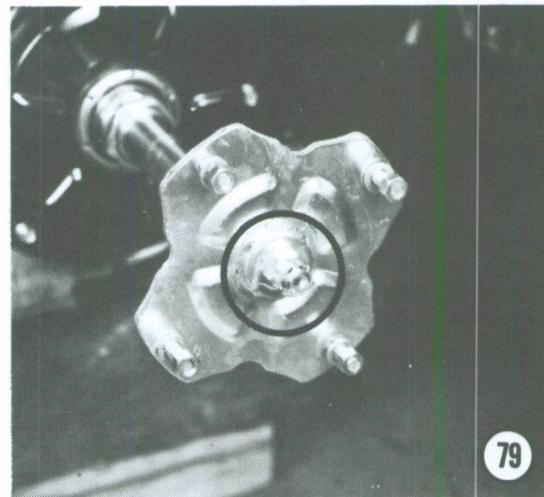
#### Assembly

1. Apply a light coat of multipurpose grease to the pockets of the damper holder where the rubber dampers ride and to the center flange area.
2. Make sure the rubber dampers and O-ring seal are installed in one of the damper holders.
3. Place the driven sprocket onto this assembly and install the other damper holder.
4. Align the holes in the 2 damper holders, install the bolts (B, Figure 75) and tighten securely.
5. Slide the driven sprocket assembly onto the left-hand end of the rear axle.
6. Install the nuts (A, Figure 75) securing the driven sprocket assembly to the axle and tighten to the torque specification listed in Table 1.
7. Install the rear axle as described in this chapter.

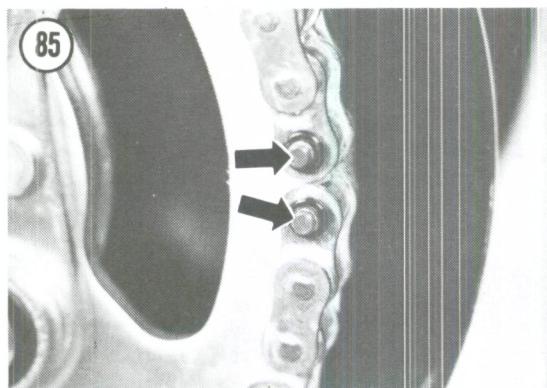
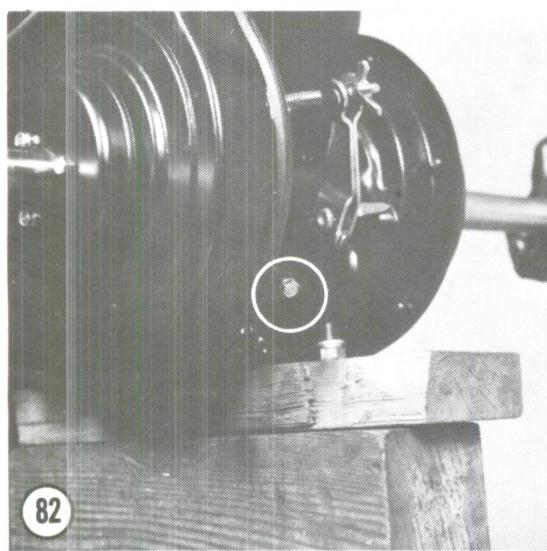
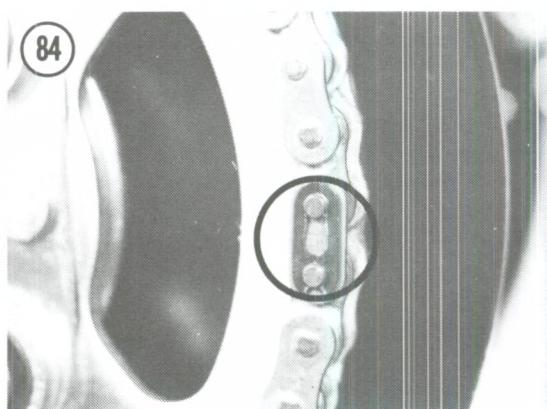
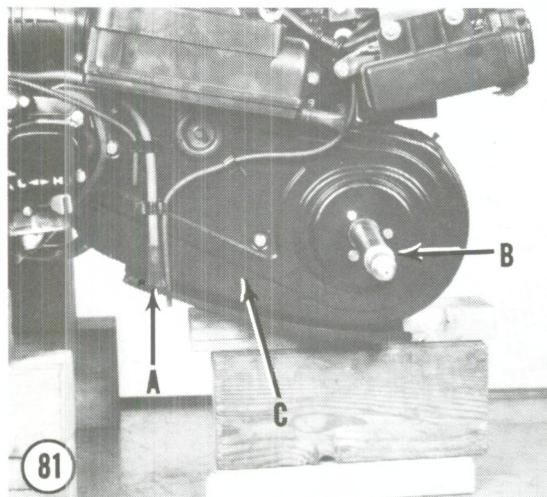
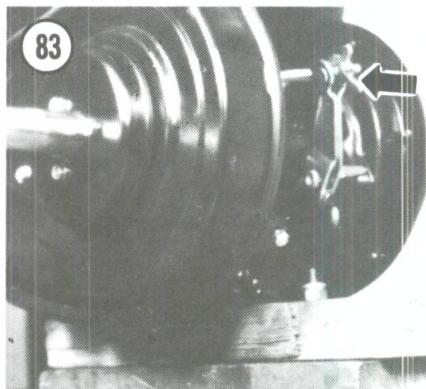
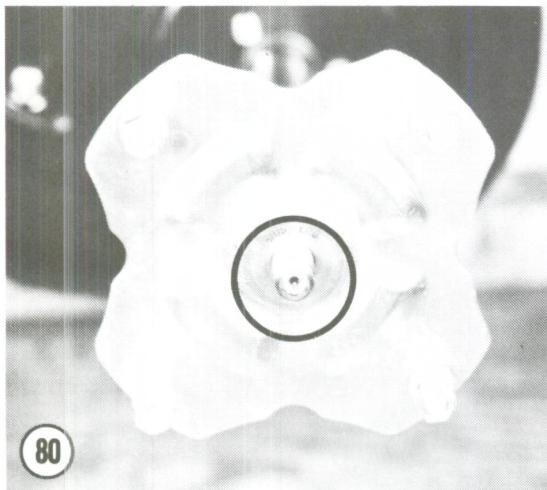
#### REAR AXLE AND DRIVEN SPROCKET (1984 ATC110 AND ATC125M)

#### Removal/Installation

1. Place the ATC on level ground and set the parking brake.



2. Remove the seat/rear fender assembly.
3. Remove both rear wheels as described in this chapter.
4. To remove the hubs, perform the following:
  - a. Remove the cotter pin and castellated nut securing the rear hub (Figure 79).
  - b. Remove the lockwasher and the hub (Figure 80).
  - c. Remove both the left- and right-hand hubs.
  - d. Remove the spacer collar(s) from the axle.
5. On the left-hand side, perform the following:
  - a. Remove the crankcase breather, carburetor and (on ATC125M) the battery overflow tubes (A, Figure 81) from the drive chain cover.
  - b. Remove the bolts securing the cover plate and slide off the cover plate (B, Figure 81).
  - c. Remove the bolts securing the drive chain cover and slide off the cover (C, Figure 81). There is one additional bolt at the rear (Figure 82).



6. Loosen the rear brake adjust nut (Figure 83).
7. Loosen the drive chain adjust nut.
8. Loosen the rear axle bearing holder bolts (there are 2 on each side). Push the rear axle assembly forward to allow slack in the drive chain.
9. Remove the drive chain master link (Figure 84). Don't lose the rubber O-ring seals (Figure 85) on the master link pins. Remove the drive chain from the driven sprocket.
10. If the driven sprocket is going to be removed, perform the following steps at this time:

- a. Remove the nuts (Figure 86) securing the damper cover and remove the cover.
- b. Slide the driven sprocket assembly from the axle (Figure 87).
11. Use a 41 mm wrench and remove the locknut (Figure 88) securing the brake drum. It may be necessary to tap on the end of the wrench with a soft-faced mallet to break the locknut loose (Figure 89).

**CAUTION**

*The locknut has had Loctite applied during assembly and is tightened to 120-140 N·m (87-101 ft.-lb.). It is very hard to remove even with the correct size tool and a lot of force. Do not apply heat to the area in order to try to loosen the locknut as this would ruin the axle.*

**NOTE**

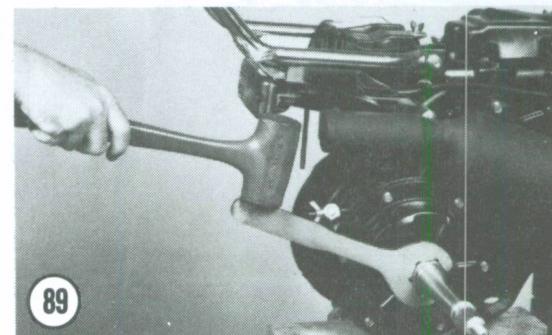
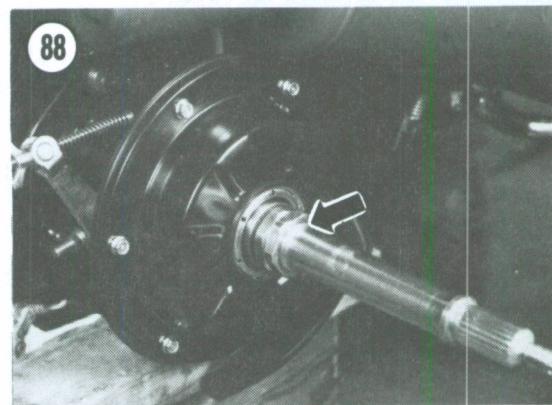
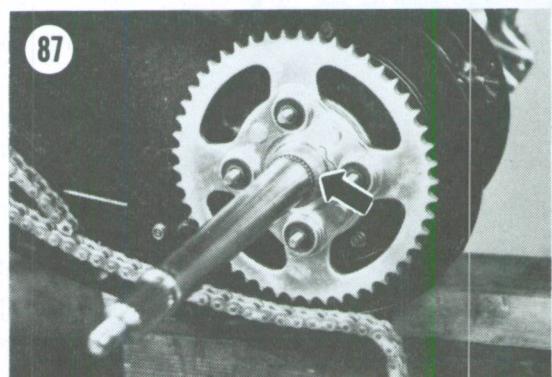
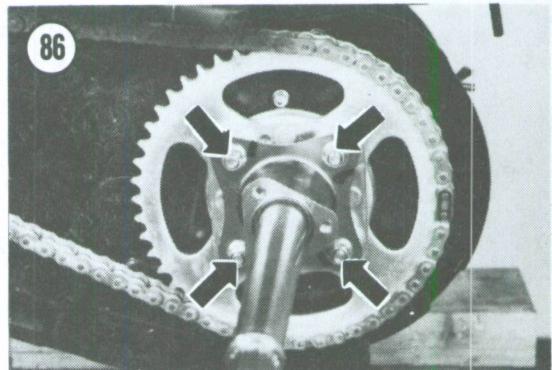
*The special 41 mm flame cut wrench (Figure 65) is available from a motorcycle dealer, Rocky or other mail order houses.*

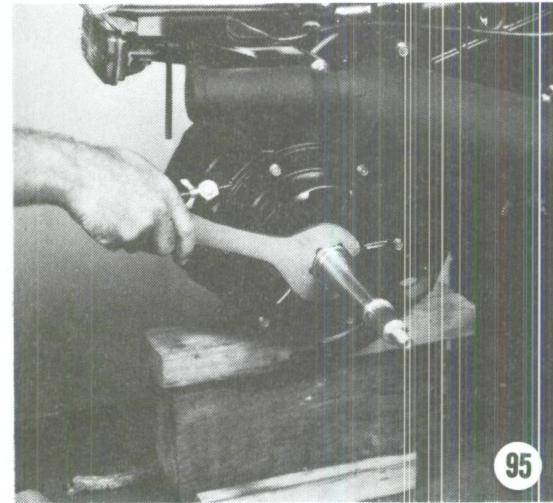
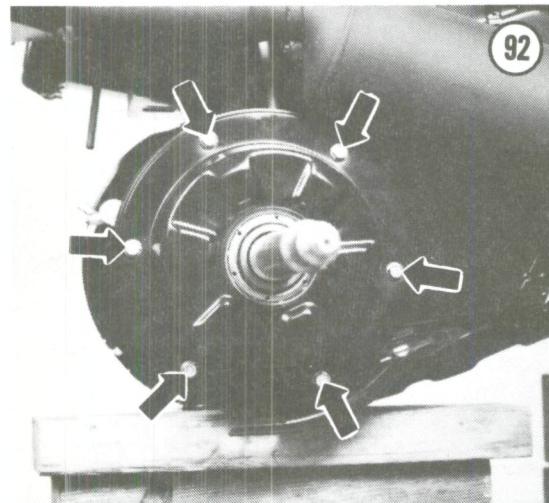
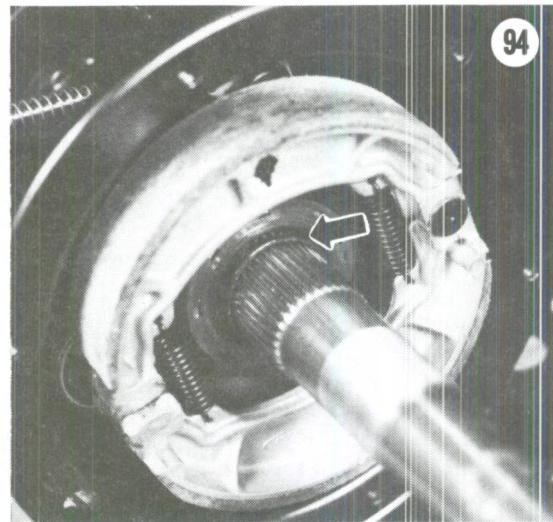
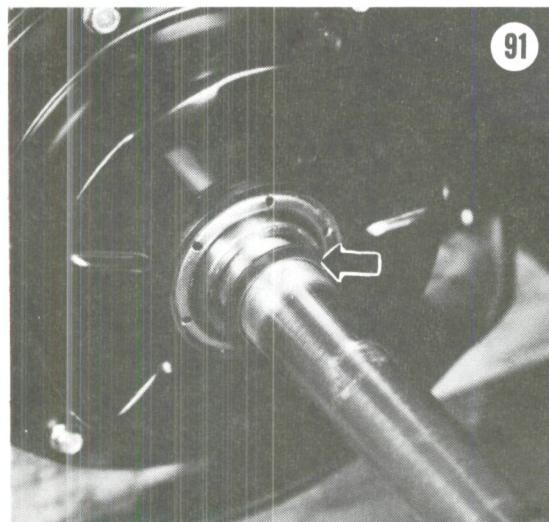
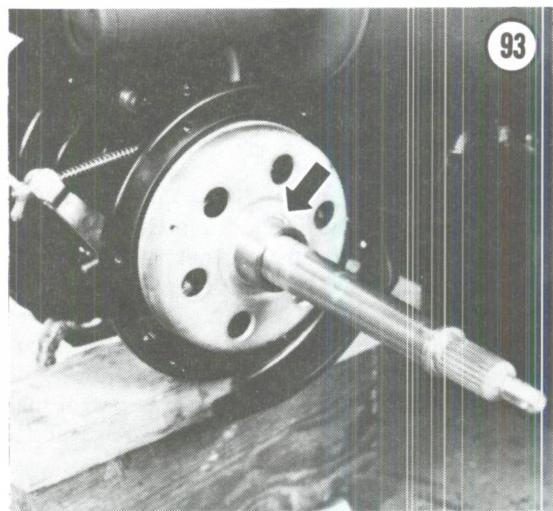
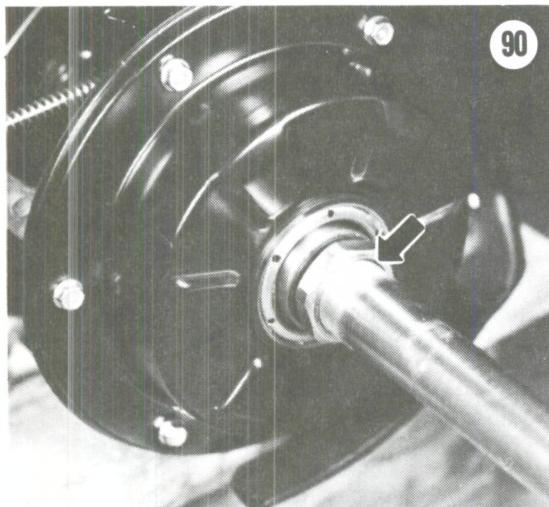
12. If you are unable to loosen the locknut it will have to be chiseled off (Figure 66). Do not chisel all the way through into the threads on the axle (Figure 67).

**NOTE**

*The inner nut does not have Loctite applied to it and is easier to remove.*

13. Remove the inner nut (Figure 90).
14. On models so equipped, slide off the dished washer (Figure 91).
15. Remove the bolts (Figure 92) securing the brake drum cover and slide off the cover.
16. Release the parking brake.
17. Slide off the brake drum (Figure 93).
18. On the right-hand side, remove the O-ring seal (Figure 94) on the axle next to the rear axle bearing holder oil seal.
19. Using a soft-faced mallet, tap on the right-hand end of the axle and withdraw the rear axle from the bearing holder from the left-hand side.
20. Install by reversing these steps, noting the following.
21. Install the brake drum and push it on all the way until it is completely seated.
22. On models so equipped, install the dished washer with the dished side facing toward the outside.
23. Install the axle inner nut. Have an assistant hold the left-hand wheel while you tighten the inner nut (Figure 95) enough to seat the brake drum.

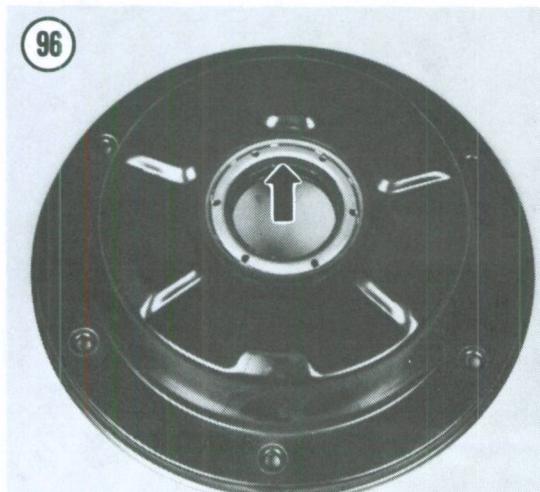




24. Apply the parking brake and completely tighten the inner nut to the torque specification listed in **Table 1**.
25. Thoroughly clean all grease from the axle threads prior to applying the Loctite in the next step.
26. Apply Loctite Lock N' Seal to the axle shaft threads and install the axle locknut. Hold onto the inner nut and tighten the locknut to the torque specification listed in **Table 1**.
27. Inspect the dust seal in the brake cover (**Figure 96**). Replace the seal if necessary. Apply a light coat of grease to the dust seal prior to installation.
28. Inspect the rubber seal on the backside of the brake cover (**Figure 97**). Replace the seal if necessary.
29. Make sure the O-ring seals (**Figure 85**) are in place on the master link prior to installing the plate and clip.
30. Install the master link so that the closed end of the clip is facing in the direction of travel (**Figure 98**).
31. Make sure to install the washer on the hub with the "OUTSIDE" mark (**Figure 80**) facing toward the outside.
32. Adjust the drive chain as described in Chapter Three.
33. Adjust the rear brake as described in Chapter Three.

#### **Disassembly/Inspection/Assembly**

- Refer to **Figure 99** for this procedure.
- 1A. If the entire axle is to be serviced, remove the axle as described in this chapter.
  - 1B. If only the driven sprocket is to be removed, perform Steps 1-10 of *Removal/Installation* in this chapter.

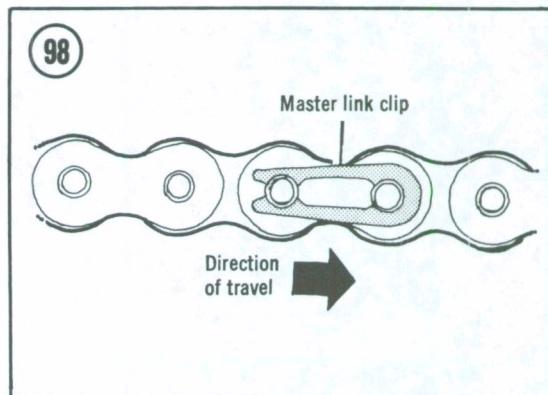
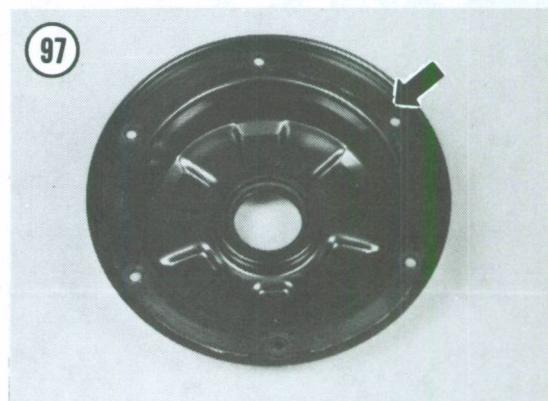


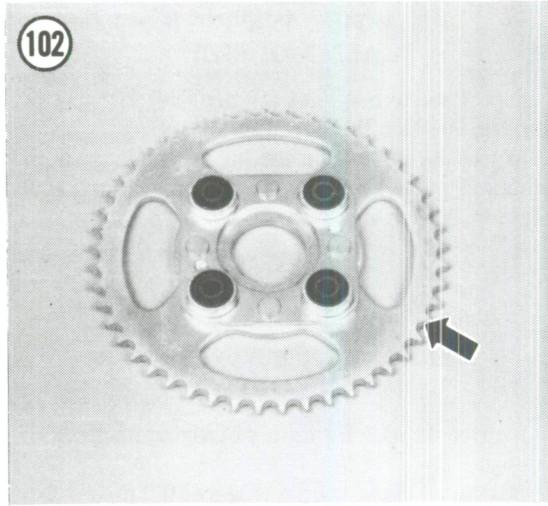
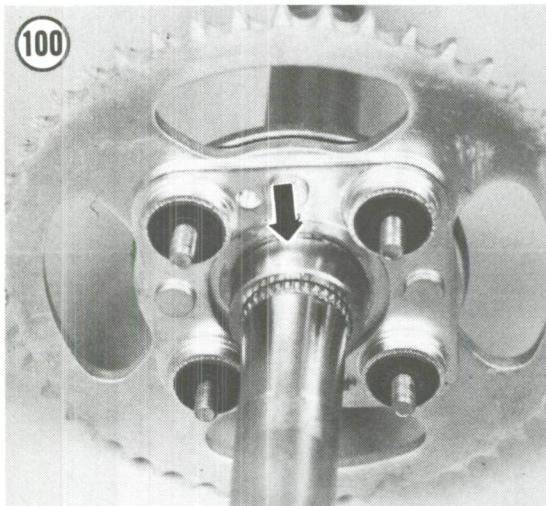
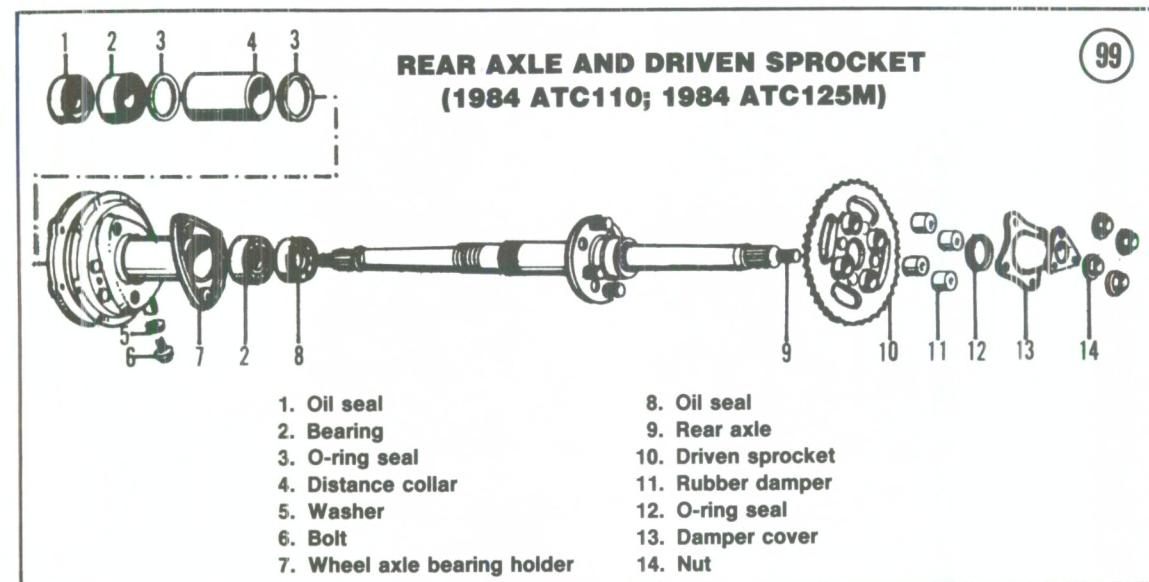
2. Remove the snap ring (**Figure 100**) securing the driven sprocket to the rear axle.
3. Slide the driven sprocket assembly off the rear axle.
4. Inspect the rubber dampers (**Figure 101**) for signs of damage or deterioration. If they are damaged the entire driven sprocket must be replaced as the rubber dampers are an integral part of the component.
5. Inspect the driven sprocket (**Figure 102**). Compare to **Figure 60**. If it is worn or distorted, replace the sprocket.

#### **NOTE**

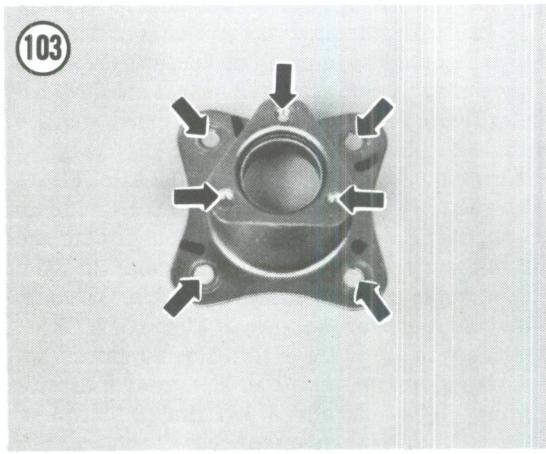
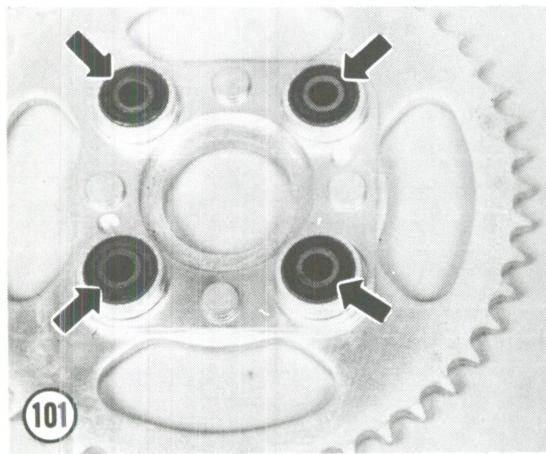
*If the driven sprocket is worn or damaged and must be replaced, also inspect the drive chain and drive sprocket for damage. Never replace just one of these 3 components without a thorough inspection of all the rest. If one is replaced, the other 2 should also be replaced. If not, the new component will wear out prematurely.*

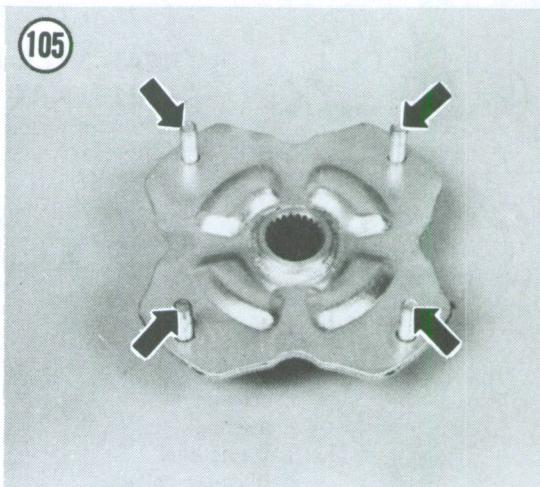
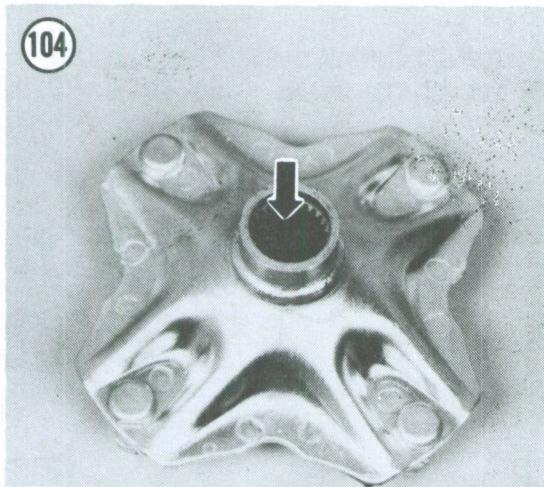
6. Inspect the bolt holes and threaded holes in the damper cover (**Figure 103**) for wear or elongation; replace if necessary.





8





7. Assemble by reversing these disassembly steps.
8. If removed, install the rear axle as described in this chapter.

#### **REAR HUB INSPECTION (ALL MODELS)**

Inspect the hub splines (Figure 104) for wear or damage. Replace the hub if necessary.

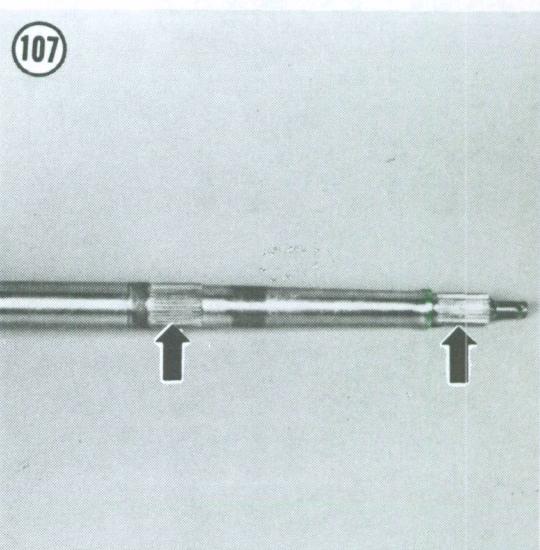
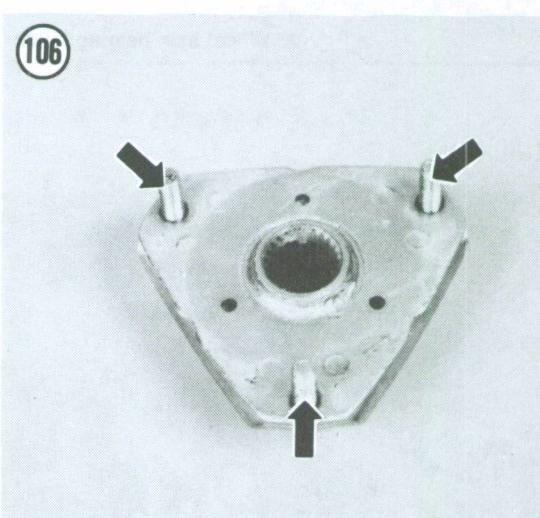
Inspect the threads on the lug nut studs for wear or damage. Refer to Figure 105 or Figure 106. Replace the hub if necessary.

**NOTE**

*The number of lug nut studs varies among the different models.*

#### **REAR AXLE INSPECTION (ALL MODELS)**

1. Inspect the axle for signs of fatigue, fractures or damage.
2. Inspect all of the splines (Figure 107) for wear or damage.
3. Inspect the flange where the driven sprocket attaches. Make sure there are no cracks or damage. Depending on the model, make sure the holes (Figure 108) are not elongated or that the threaded studs (Figure 109) are not bent or stripped. Replace the axle if necessary.
4. Check the hole at each end of the axle (Figure 110) where the cotter pin fits in. Make sure there are no fractures or cracks leading out toward the end of the axle. If any are found, replace the axle.
5. Check the axle for straightness. Use V-blocks and a dial indicator as shown in Figure 111. Check the runout in the center of the axle (remember that the actual runout is 1/2 of the total indicator reading). If the runout is 3.0 mm (0.12 in.) or greater, the axle must be replaced.



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